

## WEST Search History





DATE: Monday, October 30, 2006

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<input type="checkbox"/>	L1	\$ribitol	1858
<input type="checkbox"/>	L2	L1 and aureus	192
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<input type="checkbox"/>	L10	L9 and aureus	40
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<input type="checkbox"/>	L15	L14 and l1	1
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<input type="checkbox"/>	L17	wall near teichoic near acid	58
<input type="checkbox"/>	L18	L17 same (staphy\$ or aureus!)	19

END OF SEARCH HISTORY

. 20060228368. 07 Apr 05. 12 Oct 06. Method of protecting against staphylococcal infection. Fattom; Ali, et al. 424/164.1; 424/243.1 A61K39/085 20060101 A61K39/40 20060101

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☐ 2. 20050158346. 18 Jan 05. 21 Jul 05. Antimultiorganism Glycoconjugate vaccine. Kubler-Kielb, Joanna, et al. 424/246.1; 530/395 536/54 A61K039/00 A61K039/38 C07K014/32.

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☐ 3. 6218166. 05 Jun 95; 17 Apr 01. Adjuvant incorporation into antigen carrying cells: compositions and methods. Ravindranath; Mepur H., et al. 435/366; 424/150.1 424/174.1 424/179.1 424/184.1 424/201.1 424/240.1 424/277.1 424/278.1 424/283.1 424/78.31 435/325 435/354 435/372. A61K039/00 A61K045/00 A61K039/40 A61K039/395 .

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☐ 4. 5955079. 06 Jun 95; 21 Sep 99. Dual carrier immunogenic construct. Mond; James J., et al. 424/193.1; 424/197.11 424/201.1 424/203.1 424/244.1 424/280.1 530/403 530/412 530/806 536/123.1. A61K039/385 .

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☐ 5. 5585100. 13 Mar 95; 17 Dec 96. Dual carrier immunogenic construct. Mond; James J., et al. 424/193.1; 424/196.11 424/197.11 424/201.1 424/202.1 424/203.1 424/236.1 424/239.1 424/240.1 424/244.1 424/256.1 424/280.1 530/403 530/806. A61K039/385 A61K039/02 A61K039/12 A61K039/116 .

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☐ 6. 4220717. 22 Dec 77; 02 Sep 80. Isolation and purification of polyribosyl ribitol phosphate from Haemophilus influenzae type b.. Kuo; Joseph S.. 435/101; 424/203.1 424/256.1 424/831 435/803 435/851 536/123 536/123.1 536/127. C12D013/04 .

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☐ 7. 4196192. 28 Oct 77; 01 Apr 80. Combined Haemophilus influenzae type b and pertussis vaccine. Kuo; Joseph S. C.. 424/203.1; 424/254.1 424/256.1 424/831. A61K039/02 .

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☐ 8. US20050158346A. New glycoconjugate preparation comprises polysaccharides derived from cell wall polysaccharide preparation from Bacillus pumilus Sh 18, useful as immunogenic composition or as vaccine for eliciting an immune response in a subject. KUBLER-KIELB, J, et al. A61K039/00 A61K039/38 C07K014/32.

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Fulltext Word Count: 15844

7/3/174 (Item 2 from file: 654)

DIALOG(R)File 654:US Pat.Full.

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6239694

Derwent Accession: 1999-095329

**UTILITY**

**Opsonic and protective monoclonal and chimeric antibodies specific for lipoteichoic acid of gram positive bacteria**

Inventor: Fischer, Gerald W., Bethesda, MD, US

Schuman, Richard F., Gaithersburg, MD, US

Wong, Hing, Weston, FL, US

Stinson, Jeffrey R., Davie, FL, US

Assignee: Henry M. Jackson Foundation for the Advancement of Military  
Medicine, (02), Rockville, MD, US

Sunol Molecular Corporation, (02), Miramar, FL, US

Examiner: Smith, L. J.

Assistant Examiner: Porter, Ginny Allen

Legal Representative: Winston & Strawn LLP

	Publication Number	Kind	Date	Application Number	Filing Date
Main Patent	US 6939543	B2	20050906	US 2001893615	20010629
Related Publ	US 20020082395	A1	20020627		
Division	US 6610293	A		US 9897055	19980615
Provisional				US 60-49871	19970616

Fulltext Word Count: 15450

7/3/176 (Item 4 from file: 654)

DIALOG(R)File 654:US Pat.Full.

(c) Format only 2006 Dialog. All rts. reserv.

0005905519

Derwent Accession: 2004-461115

**Wall teichoic acid as a target for anti-staphylococcal therapies and vaccines**

Inventor: Kokai-Kun, John, INV

Peschel, Andreas, INV

Weidenmaier, Christopher, INV

Kristian, Sascha, INV

Correspondence Address: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER,  
L.L.P., 1300 I Street, N.W., Washington, DC, 20005-3315, US

	Publication Number	Kind	Date	Application Number	Filing Date
Main Patent	US 20040247605	A1	20041209	US 2003724194	20031201
Provisional				US 60-430225	20021202

Fulltext Word Count: 23613

7/3/178 (Item 6 from file: 654)  
DIALOG(R)File 654:US Pat.Full.  
(c) Format only 2006 Dialog. All rts. reserv.

0005576889 \*\*IMAGE Available  
Derwent Accession: 2003-646000  
**Opsonic monoclonal and chimeric antibodies specific for lipoteichoic acid of Gram positive bacteria**  
Inventor: Stinson, Jeffrey, INV  
Schuman, Richard, INV  
Mond, James, INV  
Lees, Andrew, INV  
Fischer, Gerald, INV  
Correspondence Address: Finnegan, Henderson, Farabow, Garrett & Dunner,  
L.L.P., 1300 I Street, N.W., Washington, DC, 20005-3315, US

	Publication Number	Kind	Date	Application Number	Filing Date
Main Patent	US 20040052779	A1	20040318	US 2002323926	20021220
Provisional				US 60-343503	20011221

Fulltext Word Count: 24045

7/3/179 (Item 7 from file: 654)  
DIALOG(R)File 654:US Pat.Full.  
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0005508756 \*\*IMAGE Available  
Derwent Accession: 1999-095329  
**Opsonic and protective monoclonal and chimeric antibodies specific for lipoteichoic acid of gram positive bacteria**  
Inventor: Fischer, Gerald, INV  
Schuman, Richard, INV  
Wong, Hing, INV  
Stinson, Jeffrey, INV  
Assignee: The Henry M. Jackson Foundation for the Advancement of Military  
Medicine(02)  
Sunol Molecular Corporation(02)  
Correspondence Address: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP,  
1300 I STREET, NW, WASHINGTON, DC, 20005, US

	Publication Number	Kind	Date	Application Number	Filing Date
Main Patent	US 20040013673	A1	20040122	US 2003601171	20030623
Continuation	US 6610293			US 9897055	19980615
Provisional				US 60-49871	19970616

Fulltext Word Count: 17578

7/3/180 (Item 8 from file: 654)  
DIALOG(R)File 654:US Pat.Full.  
(c) Format only 2006 Dialog. All rts. reserv.

0005479097 \*\*IMAGE Available  
Derwent Accession: 2003-646000  
**Opsonic monoclonal and chimeric antibodies specific for lipoteichoic**

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DATE: Monday, October 30, 2006

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END OF SEARCH HISTORY

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END OF SEARCH HISTORY

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DATE: Monday, October 30, 2006

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<input type="checkbox"/>	L1	\$ribitol	1858
<input type="checkbox"/>	L2	L1 and aureus	192
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<input type="checkbox"/>	L5	l1.clm.	218
<input type="checkbox"/>	L6	ribitol\$.ti,ab,clm.	375
<input type="checkbox"/>	L7	L6 or l5	388
<input type="checkbox"/>	L8	L7 and l4	8
<input type="checkbox"/>	L9	antipolyribosylribitol or anti-polyribosylribitol or (antibodies near polyribosylribitol) or anti-prp or antiprp or antiribitol or anti-ribitol	274
<input type="checkbox"/>	L10	L9 and aureus	40
<input type="checkbox"/>	L11	L9 same aureus	0
<input type="checkbox"/>	L12	wta.clm. or antiwta.clm.	35
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<input type="checkbox"/>	L17	wall near teichoic near acid	58
<input type="checkbox"/>	L18	L17 same (staphy\$ or aureus!)	19
<input type="checkbox"/>	L19	antiteichoic or anti-teichoic	11

END OF SEARCH HISTORY

DOCUMENT-IDENTIFIER: US 6428971 B1

TITLE: Teichoic acid enzymes and assays

Detailed Description Text (19):

Despite the nucleic acid problem, TAP was purified four-fold from the membrane preparation. The enzyme was stable for two weeks when stored in ice. Though TAP synthesizes cell wall teichoic acid in situ, lipoteichoic acid from either *B. subtilis*, *S. aureus*, or *E. faecalis* could serve as an acceptor of CDP [<sup>3</sup>H]glycerol. The availability of a commercial source of lipoteichoic acid will allow the development of the TAP assay for a high volume screen which could lead to the discovery of TAP inhibitors. It appears that TAP recognizes the polyglycerol-phosphate backbone of either cell wall teichoic acid or lipoteichoic acid and largely ignores the proximal portion of either polymer.

Detailed Description Text (20):

The biosynthetic pathway for teichoic acid has been established for many years, yet the exact function of this anionic polymer has never been determined. One report describes the use of teichoic acid as a reserve phosphate source in which gram positive bacteria draw upon the glycerolphosphate when phosphate levels in the environment are low (Grant W D. "Cell wall teichoic acid as a reserve phosphate source in *Bacillus subtilis*" *J Bacteriol* (1979) vol. 137, pp. 35-43, incorporated by reference). While this role for teichoic acid cannot be disputed, the fact that *B. subtilis* cannot survive in the absence of teichoic acid synthesis under conditions of high phosphate levels (Mauel C, Young M, Margot P, Karamata D. "The essential nature of teichoic acids in *Bacillus subtilis* as revealed by insertional mutagenesis" *Mol Gen Genet* (1991) vol. 215, pp. 388-394, incorporated by reference) indicate that a more essential role is likely. Some reports point to the ability of teichoic acid to chelate divalent cations (Fischer, W. "Lipoteichoic acid and lipids in the membrane of *Staphylococcus aureus*" *Med. Microbiol. Immunol.* (1994) vol.183, pp. 61-76, incorporated by reference), but lipoteichoic acid would presumably chelate in the absence of cell wall teichoic acid. It is far more likely that the essential nature of teichoic acid is in maintaining the structural integrity of the cell wall, due to the covalent attachment to peptidoglycan (FIG. 8). Given the information disclosed herein it would be obvious to one skilled in the art to randomly mutate the cloned *rodC* gene, integrate the mutated gene back into the chromosome, and produce a pool of TAP mutants which can be used to study the effects of teichoic acid on gram positive cell wall integrity.

Detailed Description Text (26):

TAP catalyzes the synthesis of the polyglycerolphosphate backbone of cell wall teichoic acid in *B. subtilis*, and this polymer is covalently attached to peptidoglycan (FIG. 8). Lipoteichoic acid is a structurally related polymer that is anchored to the cell membrane of gram positive bacteria by the fatty acyl side chains of a phospholipid moiety (FIG. 9). Both lipoteichoic acid and cell wall teichoic acid share the same polyglycerolphosphate backbone but there is evidence that TAP does not synthesize lipoteichoic acid in situ (Fischer, W. "Lipoteichoic acid and lipids in the membrane of *Staphylococcus aureus*" *Med. Microbiol. Immunol.* (1994) vol. 183, pp. 61-76). Herein, we present data that shows that lipoteichoic acid can serve as an alternate substrate for TAP. This is an important discovery, both because lipoteichoic acid is available commercially and cell wall teichoic acid is not, and because tests have suggested that soluble teichoic acid does not serve as a suitable substrate for TAP. This discovery now makes it possible to develop mechanistic screens for TAP inhibitors.



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(c) 2006 Reed Business Information Ltd.

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(c) 1999 AAAS

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IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.

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File 444:New England Journal of Med. 1985-2006/Oct W3  
(c) 2006 Mass. Med. Soc.

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Set Items Description

DIALOG(R)File 73:EMBASE  
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07368255 EMBASE No: 1998247739

**Association between high antistaphylococcal and teichoic acid antibody titres with rheumatic syndromes**

Valtonen J.M.O.; Syrjala M.T.; Valtonen V.V.

Dr. V.V. Valtonen, Department of Medicine, Helsinki University Central Hospital, 00290 Helsinki Finland

Clinical Rheumatology ( CLIN. RHEUMATOL. ) (Belgium) 1997, 16/6 (557-561)

CODEN: CLRHD ISSN: 0770-3198

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 42

To analyse which rheumatic syndromes are associated with serological evidence of recent *Staphylococcus aureus* infection, we studied retrospectively 44 adult patients, gathered between 1979-1990, having an acute arthritis syndrome or an exacerbation in their chronic rheumatic disease and simultaneously a high antistaphylococcal (ASTA > 4,0) and/or high teichoic acid antibody titre (TAA > 8). Patients with septic arthritis or endoprosthetic infections were not included. 25 patients had arthritis/arthritis associated with a known rheumatic disease, 9 patients had reactive arthritis and 8 patients had arthritis. The frequency of HLA-B27 in tested patients was significantly higher in the whole patient group than in the healthy Finnish population (43% v 14%,  $p < 0.001$ ). It is concluded that high ASTA and/or TAA titres are associated with various acute rheumatic syndromes including reactive arthritis.

**DRUG DESCRIPTORS:**

\* **teichoic acid** --endogenous compound--ec; \*bacterium **antibody** --endogenous compound--ec

HLA B27 antigen--endogenous compound--ec

**MEDICAL DESCRIPTORS:**

\*rheumatic disease--diagnosis--di; \* **antibody** titer; \*staphylococcus **aureus** ; \*staphylococcus infection--diagnosis--di; \*staphylococcus infection--etiology--et

disease association; rheumatoid arthritis--diagnosis--di; reactive arthritis--diagnosis--di; arthritis--diagnosis--di; gene frequency; HLA typing; finland; human; male; female; clinical article; controlled study; adolescent; aged; adult; article; priority journal

CAS REGISTRY NO.: 9041-38-7 ( **teichoic acid** )

**SECTION HEADINGS:**

004 Microbiology: Bacteriology, Mycology, Parasitology and Virology

026 Immunology, Serology and Transplantation

031 Arthritis and Rheumatism

14/9/16 (Item 16 from file: 73)

DIALOG(R)File 73:EMBASE  
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05080991 EMBASE No: 1992221207

**Detection of teichoic acid antibodies in *Staphylococcus aureus* infections**

Wise K.A.; Tosolini F.A.

Microbiology Department, Wollongong Hospital, Crown Street, Wollongong, N. S. W. 2500 Australia

Pathology (-PATHOLOGY-) (Australia) 1992, 24/2 (102-108)

CODEN: PTLGA ISSN: 0031-3205  
DOCUMENT TYPE: Journal; Article  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

A commercially available agar gel diffusion (AGD) assay was used to investigate the teichoic acid **antibody** (TAA) response in 183 patients with proven *Staphylococcus aureus* (SA) infections. Two control groups were also investigated. One consisted of 100 hospitalized patients with a variety of medical and surgical conditions other than SA infection and the other consisted of 116 healthy hospital staff members. The sensitivity of the AGD assay varied markedly depending on the site of infection in the patients with proven SA infections. All patients with SA endocarditis developed positive TAA titres ( $\geq 1.4$ ), although more than one third of these were initially negative. In patients with chronic osteomyelitis or septic arthritis, 41% had positive TAA titres, whereas no positive titres were detected in patients with acute osteomyelitis or septic arthritis. Lower rates of positive TAA titres were found in patients with deep abscesses (27%), pneumonia (14%) and post-operative infections (9%), but no positive titres occurred in patients with acute uncomplicated bacteremia, cellulitis or meningitis. In 100 hospitalized control patients, no positive titres were detected, and only  $\geq 1.4$  of 116 (0.9%) healthy hospital staff controls was positive. Suggested guidelines for the use of the AGD assay are discussed.

DRUG DESCRIPTORS:

\* **antibody** --endogenous compound--ec; \* **teichoic acid** --endogenous compound--ec

MEDICAL DESCRIPTORS:

\*staphylococcus infection--etiology--et  
abscess; article; bacteremia; bacterial arthritis--etiology--et; chronic osteomyelitis--etiology--et; controlled study; diagnostic accuracy; endocarditis--etiology--et; human; major clinical study; pneumonia--etiology--et; postoperative infection; priority journal; staphylococcus **aureus**

CAS REGISTRY NO.: 9041-38-7 ( **teichoic acid** )

SECTION HEADINGS:

004 Microbiology: Bacteriology, Mycology, Parasitology and Virology

14/9/18 (Item 18 from file: 73)

DIALOG(R) File 73:EMBASE

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04908654 EMBASE No: 1992048869

**Effects of *Staphylococcus aureus* cell wall products (teichoic acid, peptidoglycan) and enterotoxin B on immunoglobulin (IgE, IgA, IgG) synthesis and CD23 expression in patients with atopic dermatitis**

Neuber K.; Konig W.

Inst. Med. Mikrobiol./Immunol., Arbeitsgr. Infektabwehr-mech.,  
Ruhr-Universitat Bochum, Universitätsstrasse 150, 4630 Bochum, Germany  
Immunology ( IMMUNOLOGY ) (United Kingdom) 1992, 75/1 (23-28)

CODEN: IMMUA ISSN: 0019-2805

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

The influence of staphylococcal cell wall products (teichoic acid, peptidoglycan) and enterotoxin B on peripheral blood lymphocytes (PBL) from patients with atopic dermatitis (AD) was investigated. The parameters studied were spontaneous and interleukin-inducible **immunoglobulin** (IgA, IgE, IgG) synthesis and CD23-expression. PBL from non-atopic donors

served as controls. Teichoic acid and peptidoglycan induced an enhanced synthesis of IgA and IgG in normal donors. However, IgA and IgG synthesis in PBL from patients with AD was significantly suppressed by teichoic acid and enterotoxin B. The incubation of PBL from normal donors with enterotoxin B and interleukin-4 (IL-4) or IL-5 led to a significant suppression of IgA and IgG synthesis. Co-stimulation of PBL with teichoic acid or peptidoglycan and IL-4 led to a pronounced increase in IgE synthesis and CD23 expression in patients with AD. Our data indicate that cell wall products and toxins of staphylococci modulate the cytokine-dependent humoral immunity in patients with AD and may be responsible for allergic skin reactions in AD.

DRUG DESCRIPTORS:

\*cytokine--endogenous compound--ec; \*peptidoglycan--endogenous compound--ec  
; \* **teichoic acid** --endogenous compound--ec  
cd23 antigen--endogenous compound--ec; unclassified drug

MEDICAL DESCRIPTORS:

\* **immunoglobulin** production

adult; article; atopic dermatitis; clinical article; controlled study;  
human; human cell; priority journal

DRUG TERMS (UNCONTROLLED): enterotoxin b--endogenous compound--ec

CAS REGISTRY NO.: 9047-10-3 (peptidoglycan); 9041-38-7 ( **teichoic acid** )

SECTION HEADINGS:

- 004 Microbiology: Bacteriology, Mycology, Parasitology and Virology
- 013 Dermatology and Venereology
- 026 Immunology, Serology and Transplantation

14/9/23 (Item 23 from file: 73)

DIALOG(R) File 73:EMBASE

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04472602 EMBASE No: 1990360711

**Preparation of a latex reagent for the detection of anti-staphylococcus aureus ribitol teichoic acid antibodies**

De Montclos M.; Flandrois J.-P.

Bacteriology Laboratory, Universite Claude Bernard Lyon I, Faculte de  
Medecine Lyon-Sud, F-69310 Pierre-Benite France

Zentralblatt fur Bakteriologie ( ZENTRALBL. BAKTERIOL. ) (Germany) 1990  
, 274/1 (50-60)

CODEN: ZEBAE ISSN: 0934-8840

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: GERMAN

DRUG DESCRIPTORS:

\* **teichoic acid**

latex

MEDICAL DESCRIPTORS:

\* **antibody** detection; \*staphylococcus. **aureus**

**antibody** titer; antigen binding; antigen purification; chemical analysis;  
counter immunoelectrophoresis; immunogenicity; latex agglutination test;  
human; article

CAS REGISTRY NO.: 9041-38-7 ( **teichoic acid** )

SECTION HEADINGS:

- 004 Microbiology: Bacteriology, Mycology, Parasitology and Virology

14/9/28 (Item 28 from file: 73)

DIALOG(R) File 73:EMBASE

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An enzyme-linked immunosorbent assay was used to evaluate the immunoglobulin G ( IgG ) response to Staphylococcus aureus crude teichoic acid (TA) and peptidoglycan (PG) in both rabbits and patients with osteomyelitis. In rabbits with experimental S. aureus osteomyelitis, elevated levels of IgG to TA were present in 13/18 (72%) of the serum samples obtained at 4 and 10 weeks postinfection. In contrast, only 5/18 (28%) of these sera were found to be positive for antibodies to PG. Of a total of 39 patients with confirmed S. aureus osteomyelitis (11 acute, 28 chronic), IgG to TA was elevated in 17 (44%), whereas antibodies to PG were found to be increased in only 1 (3%). Cross-reacting antibodies to S. aureus TA were detected in only 1/18 (6%) of the patients with osteomyelitis caused by organisms other than S. aureus . These studies indicate that IgG to TA is more prevalent than IgG to PG in patients with staphylococcal osteomyelitis. Although these results are encouraging, a large number of patients is required for an adequate evaluation of the TA enzyme-linked immunosorbent assay for the diagnosis and management of suspected S. aureus osteomyelitis.

DRUG DESCRIPTORS:

\* immunoglobulin g; \*peptidoglycan; \* teichoic acid

MEDICAL DESCRIPTORS:

\* antibody response; \*osteomyelitis; \*staphylococcus aureus  
enzyme linked immunosorbent assay; human; rabbit; serum; bone; priority  
journal; animal experiment; animal cell

CAS REGISTRY NO.: 97794-27-9 ( immunoglobulin g); 9047-10-3 (peptidoglycan  
); 9041-38-7 ( teichoic acid )

SECTION HEADINGS:

004 Microbiology: Bacteriology, Mycology, Parasitology and Virology  
033 Orthopedic Surgery  
026 Immunology, Serology and Transplantation

14/9/30 (Item 30 from file: 73)

DIALOG(R) File 73:EMBASE

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03419227 EMBASE No: 1987171804

Structure of the Staphylococcus aureus cell wall determined by the freeze-substitution method

Umeda A.; Ueki Y.; Amako K.

Department of Bacteriology, Faculty of Medicine, Kyushu University,  
Fukuoka 812 Japan

Journal of Bacteriology ( J. BACTERIOL. ) (United States) 1987, 169/6  
(2482-2487)

CODEN: JOBAA

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH

The fine structure of the Staphylococcus aureus cell wall was determined by electron microscopy with the new technique of rapid freezing and substitution fixation. The surface of the cell wall was covered with a fuzzy coat which consisted of fine fibers or an electron-dense mass. Morphological examination of the cell wall, which was treated sequentially with sodium dodecyl sulfate, trypsin, and trichloroacetic acid revealed that this coat was partially removed by trypsin digestion and was completely removed by trichloroacetic acid extraction but was not affected by sodium dodecyl sulfate treatment, suggesting that the fuzzy coat consists mostly of a complex of teichoic acids and proteins. This was confirmed by the application of the concanavalin A-ferritin technique for teichoic acid and antiferritin immunoglobulin G technique for protein A.

DRUG DESCRIPTORS:

immunoglobulin ; protein; teichoic acid

MEDICAL DESCRIPTORS:

\*cell wall; \*staphylococcus aureus

priority journal; electron microscopy; nonhuman

CAS REGISTRY NO.: 9007-83-4 ( immunoglobulin ); 67254-75-5 (protein);

9041-38-7 ( teichoic acid )

SECTION HEADINGS:

004 Microbiology: Bacteriology, Mycology, Parasitology and Virology

14/9/34 (Item 34 from file: 73)

DIALOG(R)File 73:EMBASE

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03197591 EMBASE No: 1986130168

IgE and IgG antibodies to Staphylococcus aureus solubilized cell wall proteins and teichoic acid in patients with the hyper- IgE syndrome

Shibata R.; Umeda A.; Miyazaki S.; et al.

Department of Pediatrics, National Minami-Fukuoka Chest Hospital, Minami-ku, Fukuoka 815 Japan

Acta Paediatrica Japonica (Overseas Edition) ( ACTA PAEDIATR. JPN. OVERS. ED. ) (Japan) 1985, 27/4 (575-579)

CODEN: APDJB

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH

DRUG DESCRIPTORS:

\* immunoglobulin e; \* immunoglobulin g

bacterium antibody ; cell membrane protein; teichoic acid

MEDICAL DESCRIPTORS:

\*hyperimmunoglobulinemia; \*staphylococcus aureus

radioimmunoassay; human; child; diagnosis

CAS REGISTRY NO.: 37341-29-0 ( immunoglobulin e); 97794-27-9 (

immunoglobulin g); 9041-38-7 ( teichoic acid )

SECTION HEADINGS:

007 Pediatrics and Pediatric Surgery

026 Immunology, Serology and Transplantation

004 Microbiology: Bacteriology, Mycology, Parasitology and Virology

025 Hematology

14/9/35 (Item 35 from file: 73)

DIALOG(R)File 73:EMBASE

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03182566 EMBASE No: 1986115143

Antibodies to staphylococcal teichoic acid and alpha toxin in patients with cystic fibrosis

Ericsson A.; Granstrom M.; Mollby R.; Strandvik B.

Department of Pediatrics, Huddinge University Hospital, S-14186 Huddinge Sweden

Acta Paediatrica Scandinavica ( ACTA PAEDIATR. SCAND. ) (Sweden) 1986, 75/1 (139-144)

CODEN: APSVA

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH

~~Enzyme-linked immunosorbent assay (ELISA) was used for IgG antibody determination to teichoic acid and alpha-toxin from Staphylococcus aureus~~

in 65 patients with cystic fibrosis (CF). In patients chronically colonized with *S. aureus*, elevated titres to teichoic acid were found in 13/35 (37%) patients, to alpha-toxin in 12/35 (34%) and to either antigen in 18/35 (51%). Patients with elevated titres to teichoic acid had a significantly lower X-ray score than patients with normal titres. The highest titres against both teichoic acid and alpha-toxin were seen in patients not receiving optimal treatment. These findings suggest that staphylococci contribute to the tissue damage in CF and that the determination of **antibodies** especially to staphylococcal teichoic acid might be of value in the diagnosis and management of staphylococcal infections in patients with CF.

DRUG DESCRIPTORS:

\*alpha toxin; \* **teichoic acid**

**antibody**

MEDICAL DESCRIPTORS:

\*cystic fibrosis; \*staphylococcus **aureus**

enzyme linked immunosorbent assay; priority journal; child; diagnosis; major clinical study; human; blood and hemopoietic system; lymphatic system; respiratory system

CAS REGISTRY NO.: 9041-38-7. ( **teichoic acid** )

SECTION HEADINGS:

007 Pediatrics and Pediatric Surgery

004 Microbiology: Bacteriology, Mycology, Parasitology and Virology

015 Chest Diseases, Thoracic Surgery and Tuberculosis

022 Human Genetics

14/9/55 (Item 55 from file: 73)

DIALOG(R) File 73:EMBASE

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02126636 EMBASE No: 1982167733

**Polyclonal response of human lymphocytes to bacterial cell walls, peptidoglycans and teichoic acids**

Rasanen L.; Mustikkamaki U.P.; Arvilommi H.

Inst. Biomed. Sci., Univ. Tampere, SF-33101 Tampere 10 Finland

Immunology ( IMMUNOLOGY ) (United Kingdom) 1982, 46/3 (481-486)

CODEN: IMMUA

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH

It has been found earlier that many bacteria are **polyclonal** activators of human lymphocytes. This phenomenon was further analysed by preparing cell walls, peptidoglycans and teichoic acids from *Staphylococcus aureus* Wood 46 and *Bacillus subtilis* and studying their capacity to stimulate human adult and newborn lymphocytes to proliferate and to produce leucocyte inhibitory factor (LIF). All these bacterial surface components acted as **polyclonal** activators. In our opinion these findings further strengthen the view that in infections there are a variety of bacterial products capable of inducing a **polyclonal** response of the host.

DRUG DESCRIPTORS:

\*bacterial antigen; \*peptidoglycan; \* **teichoic acid**

leukocyte migration inhibition factor

MEDICAL DESCRIPTORS:

\* **antibody** production; \*lymphocyte transformation

*bacillus subtilis*; **polyclonal** activation; *staphylococcus aureus*; in vitro study; animal experiment; blood and hemopoietic system; normal human

CAS REGISTRY NO.: 9047-10-3 (peptidoglycan); ~~9041-38-7~~ ( **teichoic acid** )

SECTION HEADINGS:

026 Immunology, Serology and Transplantation  
004 Microbiology: Bacteriology, Mycology, Parasitology and Virology  
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9/9/5 (Item 1 from file: 73)  
DIALOG(R) File 73:EMBASE  
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03100992 EMBASE No: 1986213569

**Relationship of staphylococcal tolerance, teichoic acid antibody, and serum bactericidal activity to therapeutic outcome in Staphylococcus aureus bacteremia**

Rahal Jr. J.J.; Chan Y.-K.; Johnson G.  
Department of Medicine, New York University School of Medicine, New York, NY United States  
American Journal of Medicine ( AM. J. MED. ) (United States) 1986, 81/1 (43-52)  
CODEN: AJMEA  
DOCUMENT TYPE: Journal  
LANGUAGE: ENGLISH

A randomized cooperative study of therapy for Staphylococcus aureus bacteremia was conducted in which nafcillin was given for four or six weeks to patients with clinical endocarditis and for two or four weeks to those without evidence of endocarditis. Eighty-four patients were enrolled, and 32 completed treatment, all of whom had bacteriologic cures. Three patients, treated for two weeks, had complications that were undetectable by assay of serum teichoic acid antibody. Data were insufficient to allow conclusions regarding the optimal duration of therapy for patients with or without endocarditis. However, the results suggest that neither clinical nor immunologic methods can reliably detect complications in patients treated for two weeks only. In addition, patients infected with tolerant organisms remained febrile longer than those infected with nontolerant strains but did not require additional antibiotics for cure. Peak serum bactericidal activity at a dilution of 1:8 or greater was present in all patients. Serum bactericidal activity of 1:8 prior to an antibiotic dose was not necessary for cure.

MANUFACTURER NAMES: bristol

DRUG DESCRIPTORS:

\*bactericide; \*nafcillin

MEDICAL DESCRIPTORS:

\*adverse drug reaction; \*bacteremia; \*drug blood level; \*drug efficacy; \*drug indication; \*endocarditis; \*drug therapy; \*staphylococcus aureus serum; heart; priority journal; therapy; intravenous drug administration; clinical article; in vitro study; methodology; human; blood and hemopoietic system

MEDICAL TERMS (UNCONTROLLED): **teichoic acid antibody**

CAS REGISTRY NO.: 147-52-4, 985-16-0 (nafcillin)

SECTION HEADINGS:

004 Microbiology: Bacteriology, Mycology, Parasitology and Virology  
026 Immunology, Serology and Transplantation  
006 Internal Medicine  
037 Drug Literature Index

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\$0.04 Estimated cost File155  
\$0.07 0.012 DialUnits File5  
\$0.07 Estimated cost File5



magainin 1--pharmacokinetics--pk; cecropin--pharmacokinetics--pk;  
lactoferrin--pharmacokinetics--pk; **teichoic acid** --endogenous compound--ec  
; lipoteichoic acid--endogenous compound--ec; lipopolysaccharide  
--endogenous compound--ec

MEDICAL DESCRIPTORS:

\*binding site; \*drug protein binding; \*antimicrobial activity  
staphylococcus **aureus** ; escherichia coli; article  
CAS REGISTRY NO.: 108433-99-4 (magainin 1); 55599-62-7 (lactoferrin);  
**9041-38-7** ( **teichoic acid** ); 56411-57-5 (lipoteichoic acid)

SECTION HEADINGS:

004 Microbiology: Bacteriology, Mycology, Parasitology and Virology  
029 Clinical and Experimental Biochemistry  
030 Clinical and Experimental Pharmacology  
037 Drug Literature Index

14/9/4 (Item 4 from file: 73)

DIALOG(R)File 73:EMBASE

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07531011 EMBASE No: 1999008730

**Assessment of teichoic acid antibodies in the serious infections with Staphylococcus aureus**

Themeli-Digalaki K.; Economou M.; Kairis D.; Ziva C.; Spaliara L.;  
Koutsia- Carouzou C.

Acta Microbiologica Hellenica ( ACTA MICROBIOL. HELL. ) (Greece) 1998,  
43/2 (163-166)

CODEN: AMBHA ISSN: 0438-9573

DOCUMENT TYPE: Journal; Article

LANGUAGE: GREEK SUMMARY LANGUAGE: ENGLISH; GREEK

NUMBER OF REFERENCES: 10

We have evaluated the clinical usefulness of the determinations of  
teichoic acid **antibody** (TAA) in 108 patients with colonization or  
infection with Staphylococcus **aureus** and the healthy donors as control.  
The technique of gel diffusion was used. Of total 109 specimens, TAA were  
detected in 39 (36,1%). Analytically, in patients with septicaemia 62,5%,  
colonization 10,5%, pus or trauma with isolation of S. **aureus** (36,1%) and  
serious infections (osteomyelitis, septic arthritis and revision of total  
arthroplasties 76%). Negative results had patients with coagulase negative  
Staphylococcus and healthy donors. Good correlation between a positive  
culture for Staphylococcus **aureus** and TAA was seen in 24 patients with  
serious infections. The results of this study suggest that TAA titres are  
useful in diagnosis of staphylococcal infections.

DRUG DESCRIPTORS:

\* **teichoic acid** ; \*bacterium **antibody** --endogenous compound--ec

MEDICAL DESCRIPTORS:

\* **antibody** detection; \*staphylococcus infection--diagnosis--di; \*  
staphylococcus **aureus**

**antibody** titer; **antibody** blood level; correlation function;  
serodiagnosis; bacterium culture; human; major clinical study; article  
CAS REGISTRY NO.: **9041-38-7** ( **teichoic acid** )

SECTION HEADINGS:

004 Microbiology: Bacteriology, Mycology, Parasitology and Virology  
006 Internal Medicine  
026 Immunology, Serology and Transplantation

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14/9/5 (Item 5 from file: 73)

Journal of infectious diseases (UNITED STATES) Jun 1983, 147 (6)  
p1101, ISSN 0022-1899--Print Journal Code: 0413675  
Publishing Model Print  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: MEDLINE; Completed  
Subfile: AIM; INDEX MEDICUS  
Descriptors: \*Immunoglobulin G--analysis--AN; \* Immunoglobulin M  
--analysis--AN; \* Staphylococcal Infections--immunology--IM; \*Teichoic  
Acids--immunology--IM; Antibody Formation; Humans  
CAS Registry No.: 0 (Immunoglobulin G); 0 (Immunoglobulin M); 0  
(Teichoic Acids)  
Record Date Created: 19830729  
Record Date Completed: 19830729

7/9/52 (Item 52 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
(c) format only 2006 Dialog. All rts. reserv.

05816196 PMID: 6807836  
Polyclonal response of human lymphocytes to bacterial cell walls,  
peptidoglycans and teichoic acids.  
Rasanen L; Mustikkamaki U P; Arvilommi H  
Immunology (ENGLAND) Jul 1982, 46 (3) p481-6, ISSN 0019-2805--Print  
Journal Code: 0374672  
Publishing Model Print  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: MEDLINE; Completed  
Subfile: INDEX MEDICUS  
It has been found earlier that many bacteria are polyclonal activators  
of human lymphocytes. This phenomenon was further analysed by preparing  
cell walls, peptidoglycans and teichoic acids from *Staphylococcus aureus*  
Wood 46 and *Bacillus subtilis* and studying their capacity to stimulate  
human adult and newborn lymphocytes to proliferate and to produce leucocyte  
inhibitory factor (LIF). All these bacterial surface components acted as  
polyclonal activators. In our opinion these findings further strengthen  
the view that in infections there are a variety of bacterial products  
capable of inducing a polyclonal response of the host.  
Descriptors: \*Cell Wall--immunology--IM; \*Lymphocyte Activation;  
\*Peptidoglycan--immunology--IM; \*Teichoic Acids--immunology--IM; Adult;  
*Bacillus subtilis*--immunology--IM; Fetal Blood--immunology--IM; Humans;  
Infant, Newborn; Leukocyte Migration-Inhibitory Factors--biosynthesis--BI;  
*Staphylococcus aureus* --immunology--IM  
CAS Registry No.: 0 (Leukocyte Migration-Inhibitory Factors); 0  
(Peptidoglycan); 0 (Teichoic Acids)  
Record Date Created: 19820910  
Record Date Completed: 19820910

7/9/14 (Item 14 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
(c) format only 2006 Dialog. All rts. reserv.

08130998 PMID: 2473994  
Antibodies to staphylococcal peptidoglycan and its peptide epitopes,  
teichoic acid, and lipoteichoic acid in sera from blood donors and

patients with staphylococcal infections.

Wergeland H I; Haaheim L R; Natas O B; Wesenberg F; Oeding P  
Department of Microbiology and Immunology, Gade Institute, Bergen,  
Norway.

Journal of clinical microbiology (UNITED STATES) Jun 1989, 27 (6)  
p1286-91, ISSN 0095-1137--Print Journal Code: 7505564

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

**Antibodies** to the **staphylococcal** antigens peptidoglycan, beta-ribitol teichoic acid, and lipoteichoic acid, as well as to the peptidoglycan epitopes L-Lys-D-Ala-D-Ala, L-Lys-D-Ala, and pentaglycine, were found over a wide range of concentrations in sera from both blood donors and patients with verified or suspected **staphylococcal** infections. The patient group was heterogeneous with regard to both age and type of **staphylococcal** infections, being representative for sera sent to our laboratory. In single-antigen assays **antibodies** to pentaglycine had the highest predictive positive value (67%), although only 32% of the patients had elevated levels of such **antibodies**. Combinations of test antigens could yield positive predictive values as high as 100%, but then the fraction of positive sera was low. Indeed, the fraction of patient sera which was positive in multiple-antigen tests never exceeded 61%. The clinical usefulness of these seroassays for identifying **Staphylococcus aureus** as a causative agent was limited, owing to the considerable overlap in the range of **antibody** concentrations between patient and blood donor sera.

Descriptors: \***Antibodies**, Bacterial--analysis--AN; \***Antigens**, Bacterial--immunology--IM; \* **Staphylococcal** Infections--immunology--IM; \* **Staphylococcus aureus** --immunology--IM; Adolescent; Adult; Aged; Blood Donors; Child; Enzyme-Linked Immunosorbent Assay; Epitopes--immunology--IM; Humans; **Immunoglobulins** --analysis--AN; Lipopolysaccharides--immunology--IM; Middle Aged; Peptidoglycan--immunology--IM; Predictive Value of Tests ; **Staphylococcal** Infections--diagnosis--DI; **Staphylococcal** Infections--microbiology--MI; Teichoic Acids--immunology--IM

CAS Registry No.: 0 (Antibodies, Bacterial); 0 (Antigens, Bacterial); 0 (Epitopes); 0 (Immunoglobulins); 0 (Lipopolysaccharides); 0 (Peptidoglycan); 0 (Teichoic Acids); 56411-57-5 (lipoteichoic acid)

Record Date Created: 19890901

Record Date Completed: 19890901

7/9/2 (Item 2 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 2006 Dialog. All rts. reserv.

13069406 PMID: 11199222

**Immunoreactivity of 80-kDa peptidoglycan and teichoic acid-like substance of slime producing S. epidermidis and specificity of their antibodies studied by an enzyme immunoassay.**

Kolonitsiou F; Syrokou A; Karamanos N K; Anastassiou E D; Dimitracopoulos G

Department of Microbiology, School of Medicine, University of Patras, Greece.

Journal of pharmaceutical and biomedical analysis (England) Jan 2001, 24 (3) p429-36, ISSN 0731-7085--Print Journal Code: 8309336

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

7/3/204 (Item 5 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00467529 \*\*Image available\*\*

OPSONIC AND PROTECTIVE MONOCLONAL AND CHIMERIC ANTIBODIES SPECIFIC FOR  
LIPOTEICHOIC ACID OF GRAM POSITIVE BACTERIA  
ANTICORPS OPSONIQUES, MONOCLONAUX PROTECTEURS, ET CHIMERES SPECIFIQUES A  
L'ACIDE LIPOTEICHOIQUE DES BACTERIES GRAM POSITIF

Patent Applicant/Assignee:

HENRY M JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE,

Inventor(s):

FISCHER Gerald W,  
SCHUMAN Richard F,  
WONG Hing,  
STINSON Jeffrey L,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9857994 A2 19981223

Application: WO 98US12402 19980616 (PCT/WO US9812402)

Priority Application: US 9749871 19970616

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM  
GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX  
NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH GM  
KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI  
FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 25186

7/3/205 (Item 6 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00401599

TEICHOIC ACID ENZYMES AND ASSAYS  
ENZYMES D'ACIDE TEICHOIQUE ET DOSAGES

Patent Applicant/Assignee:

PHARMACIA & UPJOHN COMPANY,  
SHINABARGER Dean L,  
SWANEY Steven M,  
EGAN Sara E,

Inventor(s):

SHINABARGER Dean L,  
SWANEY Steven M,  
EGAN Sara E,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9742343 A2 19971113

Application: WO 97US7123 19970505 (PCT/WO US9707123)

Priority Application: US 9616868 19960507

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU  
IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL  
PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN YU GH KE LS MW SD SZ  
UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC  
NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

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Terminal set to DLINK

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Set	Items	Description
S1	21	'TEICHOIC ACID ANTIBODIES' OR 'TEICHOIC ACID ANTIBODY'
S2	1	'TEICHOIC ACID PEPTIDOGLYCAN ANTI-WHOLE CELL AN'
S3	647	RN='9041-38-7'
S4	51679	R1:R2
S5	51679	S3 OR S4
S6	3826	S5 AND (IMMUNOGLOB? OR ANTIBOD? OR IGG OR IGM OR SIGA OR IG OR ANTISER? OR POLYCLONAL? OR MAB OR MOAB OR MONOCLONAL? OR - SCFV?)
S7	1388	S6/2002:2006
S8	2438	S6 NOT S7
S9	22	S1 OR S2
S10	1965816	9/2002:2006
S11	22	S9 NOT S10
S12	12	S8 AND (TAPHYLOC? OR CROSSREACT?)
S13	14	S8 AND (RIBITOL? OR RIBOTOL?)
S14	80	S8 AND AUREUS?
S15	0	S9/2002:2006

? t s9/9/5

14/9/2 (Item 2 from file: 73)

DIALOG(R) File 73:EMBASE

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07909622 EMBASE No: 1999382930

Initial binding sites of antimicrobial peptides in *Staphylococcus aureus* and *Escherichia coli*

Vorland L.H.; Ulvatne H.; Rekdal O.; Svendsen J.S.

Dr. L.H. Vorland, Department of Medical Microbiology, NO-9038 University Hospital, Tromsø Norway

Scandinavian Journal of Infectious Diseases ( SCAND. J. INFECT. DIS. ) ( Norway) 1999, 31/5 (467-473)

CODEN: SJIDB ISSN: 0036-5548

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 37

We examined the initial binding sites of magainin 1, cecropin P1 and lactoferricin B in *Staphylococcus aureus* and *Escherichia coli*. All 3 peptides were active against *E. coli*, whereas only lactoferricin B exerted any activity against *S. aureus*. Soluble lipoteichoic acid and lipopolysaccharide both interacted with all 3 peptides, whereas soluble teichoic acid interacted with lactoferricin B only. **Antibodies** against teichoic acid diminished the activity of lactoferricin B, while **antibodies** against lipoteichoic acid had no influence on the activity of lactoferricin B. **Antibodies** against lipopolysaccharide diminished the activity of lactoferricin B and magainin 1, but had no effect on the activity of cecropin P1 against *E. coli*. We conclude that the initial binding sites of lactoferricin B in *S. aureus*, and of lactoferricin B and magainin 1 in *E. coli*, are teichoic acid and lipopolysaccharide, respectively. Cecropin P1 seems to interact with a different binding site than those of magainin 1 and lactoferricin B in *E. coli*.

DRUG DESCRIPTORS:

03967466 EMBASE No: 1989136462

**Antibodies to staphylococcal peptidoglycan and its peptide epitopes, teichoic acid, and lipoteichoic acid in sera from blood donors and patients with staphylococcal infections**

Wergeland H.I.; Haaheim L.R.; Natas O.B.; Wesenberg F.; Oeding P.  
Department of Microbiology and Immunology, The Gade Institute, University of Bergen, Bergen Norway  
Journal of Clinical Microbiology ( J. CLIN. MICROBIOL. ) (United States)  
1989, 27/6 (1286-1291)  
CODEN: JCMID ISSN: 0095-1137  
DOCUMENT TYPE: Journal  
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

**Antibodies** to the staphylococcal antigens peptidoglycan, beta-ribitol teichoic acid, and lipoteichoic acid, as well as to the peptidoglycan epitopes L-Lys-D-Ala-D-Ala, L-Lys-D-Ala, and pentaglycine, were found over a wide range of concentrations in sera from both blood donors and patients with verified or suspected staphylococcal infections. The patient group was heterogeneous with regard to both age and type of staphylococcal infections, being representative for sera sent to our laboratory. In single-antigen assays **antibodies** to pentaglycine had the highest predictive positive value (67%), although only 32% of the patients had elevated levels of such **antibodies**. Combinations of test antigens could yield positive predictive values as high as 100%, but then the fraction of positive sera was low. Indeed, the fraction of patient sera which was positive in multiple-antigen tests never exceeded 61%. The clinical usefulness of these seroassays for identifying *Staphylococcus aureus* as a causative agent was limited, owing to the considerable overlap in the range of **antibody** concentrations between patient and blood donor sera.

DRUG DESCRIPTORS:

\*bacterium **antibody** ; \*lipoteichoic acid; \*peptidoglycan; \* teichoic acid  
immunoglobulin a; immunoglobulin g; immunoglobulin m

MEDICAL DESCRIPTORS:

\*blood donor; \*staphylococcus **aureus**

serum; human; human cell; nonhuman; priority journal

CAS REGISTRY NO.: 56411-57-5 (lipoteichoic acid); 9047-10-3 (peptidoglycan)  
; 9041-38-7 ( teichoic acid ); 97794-27-9 ( immunoglobulin g);  
9007-85-6 ( immunoglobulin m)

SECTION HEADINGS:

004 Microbiology: Bacteriology, Mycology, Parasitology and Virology  
025 Hematology  
026 Immunology, Serology and Transplantation

14/9/29 (Item 29 from file: 73)

DIALOG(R) File 73:EMBASE

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03517908 EMBASE No: 1987034844

**Antibody response to teichoic acid and peptidoglycan in Staphylococcus aureus osteomyelitis**

Jacob E.; Durham L.C.; Falk M.C.; et al.

Naval Medical Research Institute, Bethesda, MD 20814 United States

Journal of Clinical Microbiology ( J. CLIN. MICROBIOL. ) (United States)  
1987, 25/1 (122-127)

CODEN: JCMID

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH

DOCUMENT-IDENTIFIER: US 6939543 B2

**\*\* See image for Certificate of Correction \*\***

TITLE: Opsonic and protective monoclonal and chimeric antibodies specific for lipoteichoic acid of gram positive bacteria

Other Reference Publication (54):

West, Timothy E. et al., "Detection of Anti-Teichoic Acid Immunoglobulin G Antibodies in Experimental Staphylococcus epidermidis Endocarditis," Infection and Immunity, vol. 42, No. 3, 1983, pp. 1020-1026.

[Previous Doc](#)

[Next Doc](#)

[Go to Doc#](#)

DOCUMENT-IDENTIFIER: US 6703025 B1

TITLE: Multicomponent vaccines

Detailed Description Text (95):

Teichoic acids, lipoteichoic acid for example, which are polymers of glycerol or ribitol phosphate, are linked to the peptidoglycan and can be antigenic. Antiteichoic antibodies detectable by gel diffusion may be found in patients with active endocarditis due to *S. aureus*.

[Previous Doc](#)



DOCUMENT-IDENTIFIER: US 6632432 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Directed human immune globulin for the prevention and treatment of staphylococcal infections

Other Reference Publication (26):

West et al., "Detection of Anti-teichoic Acid Immunoglobulin G Antibodies in Experimental Staphylococcus epidermidis Endocarditis," Infect. and Immun., 42:1020-1026 (1983).

[Previous Doc](#)

[Next Doc](#)

[Go to Doc](#)

DOCUMENT-IDENTIFIER: US 5961975 A

TITLE: Type I surface antigen associated with staphylococcus epidermidis

Detailed Description Text (25):

Protein and nucleic acid analysis of the purified Type I and Type II antigens revealed that neither antigen contains protein or nucleic acids. Trypsin hydrolysis revealed that Type I and Type II antigens are trypsin resistant. When cells were heat treated at 100.degree. C. for thirty minutes, the surface antigens were selectively removed, i.e., teichoic acid was not removed. Before heat treatment, the cells did not react with antiteichoic acid antiserum, whereas after heat treatment, the cells did react.

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L19: Entry 2 of 11

File: PGPB

Mar 18, 2004

DOCUMENT-IDENTIFIER: US 20040052779 A1

TITLE: Opsonic monoclonal and chimeric antibodies specific for lipoteichoic acid of Gram positive bacteria

Summary of Invention Paragraph:

[0010] Further exacerbating the problem, the role of the common surface antigens on staphylococci has been unclear. For example, while lipoteichoic acid and teichoic acid make up the majority of the cell wall of *S. aureus*, there was no prior appreciation that antibodies to lipoteichoic acid and teichoic acid could be protective. Indeed, anti-teichoic acid antibodies have been often used as controls. For example, Fattom et al. examined the opsonic activity of antibodies induced against a type-specific capsular polysaccharide of *S. epidermidis*, using as controls antibodies induced against teichoic acids and against *S. hominus*. While type-specific antibodies were highly opsonic, anti-teichoic acid antibodies were not functionally different from the anti-*S. hominus* antibodies (6).

Detail Description Paragraph:

[0242] 42. West, Timothy E.; Cantey, J. R.; Apicella, Michael A.; and Burdash, N. M. 1983. Detection of anti-teichoic acid immunoglobulin G antibodies in experimental *Staphylococcus epidermidis* endocarditis, *Infection and Immunity* 42: 1020-1026.

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

0005576889 \*\*IMAGE Available  
 Derwent Accession: 2003-646000  
**Opsonic monoclonal and chimeric antibodies specific for lipoteichoic acid of Gram positive bacteria**  
 Inventor: Stinson, Jeffrey, INV  
           Schuman, Richard, INV  
           Mond, James, INV  
           Lees, Andrew, INV  
           Fischer, Gerald, INV  
 Correspondence Address: Finnegan, Henderson, Farabow, Garrett & Dunner,  
                           L.L.P., 1300 I Street, N.W., Washington, DC, 20005-3315, US

	Publication Number	Kind	Date	Application Number	Filing Date
Main Patent	US 20040052779	A1	20040318	US 2002323926	20021220
Provisional				US 60-343503	20011221

Fulltext Word Count: 24045  
**Opsonic monoclonal and chimeric antibodies specific for lipoteichoic acid of Gram positive bacteria**

**Abstract:**

The present invention encompasses **monoclonal antibodies** that bind to lipoteichoic acid (LTA) of Gram positive bacteria. The **antibodies** also bind to whole bacteria and enhance phagocytosis and killing of the bacteria in vitro. The invention also provides **antibodies** having human sequences (chimeric, humanized and human **antibodies**). The invention also sets forth the variable regions of three **antibodies** within the invention and presents the striking homology between them...

**Summary of the Invention:**

...0003] This invention in the fields of immunology and infectious diseases relates to **antibodies** that are specific for Gram positive bacteria, particularly to bacteria that bear lipoteichoic acids on their surfaces. The invention includes **monoclonal** and chimeric **antibodies**, as well as fragments, regions and derivatives thereof. This invention further relates to sequences of the variable region that enhance the **antibody**'s opsonic activity. The **antibodies** of the invention may be used for diagnostic, prophylactic and therapeutic applications...

...increasing development of bacteria that are resistant to antibiotics, such as members of the genera **Staphylococcus**.

7/3/171 (Item 4 from file: 357)  
DIALOG(R) File 357:Derwent Biotech Res.  
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0045913 DBR Accession No.: 86-03761  
Antibodies to lipoteichoic acid from Staphylococcus aureus :  
specificity of murine monoclonal and human antibodies - hybridoma  
construction and monoclonal antibody production  
AUTHOR: Aasjord P; Haaheim L R  
CORPORATE SOURCE: Avdeling for microbiologi og immunologi, Gades institutt,  
Universitetet i Bergen, MFH-bygget, N-5016 Haukeland sykehus, Norway.  
JOURNAL: Acta Pathol.Microbiol.Immunol.Scand.C (93, 6, 245-50) 1985  
CODEN: 0230T  
LANGUAGE: English

*Requested*

7/3/172 (Item 5 from file: 357)  
DIALOG(R) File 357:Derwent Biotech Res.  
(c) 2006 The Thomson Corp. All rts. reserv.

0021050 DBR Accession No.: 84-04325  
Monoclonal antibodies to immunodeterminants of lipoteichoic acids -  
hybridoma generation and monoclonal antibody production against  
cell wall determinant of Gram-negative bacteria  
AUTHOR: Jackson D E; Wong W; Largen M T; +Shockman G D  
CORPORATE SOURCE: Department of Microbiology and Immunology, Temple  
University School of Medicine, Philadelphia, Pennsylvania 19140, USA.  
JOURNAL: Infect.Immun. (43, 3, 800-03) 1984  
CODEN: INFIBR  
LANGUAGE: English

*polyglycerol  
phosphate*

7/3/173 (Item 1 from file: 654)  
DIALOG(R) File 654:US Pat.Full.  
(c) Format only 2006 Dialog. All rts. reserv.

6387125  
Derwent Accession: 1999-095329  
UTILITY

Vaccines, methods, and antibodies specific for lipoteichoic acid of  
gram positive bacteria

Inventor: Fischer, Gerald W., Bethesda, MD, US  
Schuman, Richard F., Gaithersburg, MD, US  
Wong, Hing, Weston, FL, US  
Stinson, Jeffrey R., Davie, FL, US

Assignee: The Henry M. Jackson Foundation for the Advancement of Military  
Medicine, (02)

Sunol Molecular Corporation, (02)

Correspondence Address: WINSTON & STRAWN LLP, 1700 K STREET, N.W.,  
WASHINGTON, DC, 20006, US

	Publication Number	Kind	Date	Application Number	Filing Date
Main Patent	US 20060002939	A1	20060105	US 2005193440	20050801
Division	US 6939543			US 2001893615	20010629
Division	US 6610293			US 9897055	19980615
Provisional				US 60-49871	19970616

Publication Number	Application Number	Doc Kind	Pages	Country
03059260	0241033	A2	99	WO
Publication Date	Application Date	Emperor Code	<input type="button" value="OK"/> <input type="button" value="Print Detail"/>	
Jul 24, 2003	Dec 23, 2002			
Priority Number	Inventor			
34350301	STINSON JEFFREY R			
Int'l Classification	Patent Applicant			
A61K7	BIOSYNEXUS INC			
Title Of Invention				
OPSONIC MONOCLONAL AND CHIMERIC ANTIBODIES SPECIFIC FOR LIPOTEICHOIC ACID OF GRAM POSITIVE ANTICORPS MONOCLONAUX ET CHIMERIQUES OPSONIQUES SPECIFIQUES DE L'ACIDE LIPOTEICHOIQUE DI				
Time Left:	Account	Monday, Oct 30 2006, 6:28:09 PM		

Publication Number	Application Number	Doc Kind	Pages	Country
03059260	0241033	A3	4	WO
Publication Date	Application Date	Emperor Code	<div>OK</div> <div>Print Detail</div>	
Jan 1, 9999	Dec 23, 2002			
Priority Number	Inventor			
34350301	STINSON JEFFREY R			
Int'l Classification	Patent Applicant			
C12P21/08	BIOSYNEXUS INC			
Title Of Invention				
OPSONIC MONOCLONAL AND CHIMERIC ANTIBODIES SPECIFIC FOR LIPOTEICHOIC ACID OF GRAM POSITIVE ANTICORPS MONOCLONAUX ET CHIMERIQUES OPSONIQUES SPECIFIQUES DE L'ACIDE LIPOTEICHOIQUE DI				
Time Left:	Account	Monday, Oct 30 2006, 6:28:40 PM		

Publication Number	Application Number	Doc Kind	Pages	Country
0245742	0128217	A2	26	WO
Publication Date	Application Date	Emperor Code	<div>OK</div> <div>Print Detail</div>	
Jun 13, 2002	Sep 10, 2001			
Priority Number	Inventor			
23195900	DRABICK JOSEPH J			
Int'l Classification	Patent Applicant			
A61K39/02	U S ARMY MEDICAL RES AND MATER			
Title Of Invention				
LIPOTEICHOIC ACID IMMUNOGENIC COMPOSITIONS AND METHODS OF MAKING AND USING THEREOF COMPOSITIONS IMMUNOGENIQUES D'ACIDE LIPOTEICHOIQUE ET PROCEDES DE PREPARATION ET D'UTILI				
Time Left:	Account	Monday, Oct 30 2006, 6:36:00 PM		